IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method for simultaneous communication over a bus ~~coupling at least one master agent with at least one slave agent~~, the method on a <u>first</u> master agent <u>on the bus</u> having an input and an output to the bus<u>, the method on the first master</u> comprising ~~the steps of~~:

    <u>coupling at least one slave agent with at least two master agents including a first master agent and a second master agent on a bus;</u>

determining if there is data from <u>at least one of</u> the master <u>agents</u>, and if there is data from <u>the at least one of</u> the master <u>agents</u> then performing ~~the sub-steps of~~:

    testing if the data from the bus is a token;

    ~~if~~<u>in response to</u> the data from the bus ~~is~~<u>being</u> a token, then moving the data from the <u>at least one of the</u> master <u>agents</u> to the bus and discarding the token from the bus; and

    ~~if~~<u>in response to</u> the data ~~is~~ not <u>being</u> a token from the bus, then moving the data from the input of the bus to the output of the bus;

wherein ~~if~~<u>in response to</u> the data ~~is~~ not <u>being</u> from the <u>at least one of the</u> master <u>agents</u> and the data is from the bus, then moving the data from the input of the bus to the output of the bus.

2. (Currently Amended) The method according to claim 1, the method further comprising the step of:

 determining at least one of

  if there is data from the bus, orand

  if there is data from the at least one of the master agents.

3. (Currently Amended) The method according to claim 12, the method further comprising the step of:

 determining at least one of if there is no data on the output orand if an advance line is asserted and if there isin response to the at least one of no data on the output orand an advance line is asserted then performing the step of determining at least one of

  if there is data from the bus, orand

  if there is data from the at least one of the master agents.

4. (Currently Amended) The method according to claim 1, the method further comprising the step of:

 determining if the at least one of the master agent agents is coupled to an access macro and ifin response to the at least one of the master agent agents is coupled to an access macro, then when the bus is initialized performing the step of placing tokens on the bus, where the maximum number of tokens on the bus is set equal to a total number of master agents plus the total number of slave agents less one.

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5. (Currently Amended) A method for simultaneous communication over a bus ~~which~~ ~~couples at least one master agent with at least one slave agent~~, the method on a slave agent having an input and an output to the bus, the method on the slave comprising ~~the~~ ~~steps of~~:

coupling at least one slave agent with at least two master agents including a first master agent and a second master agent on a bus;

determining if there is data from the bus or from the at least one slave,

~~and if there is~~in response to being data from the bus but not from the at least one slave then moving the data from the bus to the output, and

~~if there is~~in response to being data from the at least one slave but not the bus then moving the data from the at least one slave to the output;

determining if there is data both from the bus and the at least one slave and ~~if~~ ~~there is~~in response to being data from both the bus and the at least one slave then performing ~~the sub-steps of~~:

if the bus has priority then moving the data from the bus to the output and setting the priority to the at least one slave; and

if the bus does not have priority then moving the data from the at least one slave to the output and setting the priority to the bus.

6. (Currently Amended) The method according to claim 5, the method further comprising ~~the step of~~:

determining at least one of

if there is data from the bus, ~~or~~and

if there is data from the at least one slave.

7. (Currently Amended) The method according to claim ~~56~~, the method further comprising ~~the step of~~:

   determining at least one of if there is no data on the output or if an advance line is asserted and ~~if there is~~in response to the at least one of no data on the output ~~or~~and an advance line is asserted then ~~performing the step of~~determining at least one of

   if there is data from the bus, ~~or~~and

   if there is data from the at least one slave

8. (Currently Amended) A method for simultaneous communication over a bus ~~coupling at least one master agent with at least one slave agent~~, the method on a master agent having an input and an output to the bus, the method on the master agent comprising ~~the steps of~~:

   coupling at least one slave agent with at least two master agents including a first master agent and a second master agent on a bus;

   receiving a reset command;

   determining after being reset if at least one of the master ~~agent~~ agents is coupled to an access macro and ~~if~~in response to the at least one of the master ~~agent~~ agents is coupled to the access macro then placing n-1 tokens on the bus, where n is the total number of master agents and slave agents communicating on the bus.

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9. (Currently Amended) A data communications network for simultaneous communications between two or more agents comprising:

at least one agent designated as a slave agent coupled to a communications bus;

at least ~~one agent~~ two agents designated as a first master agent and a second master agent respectively, coupled to the communications bus;

an interface to each of the master ~~agent~~ agents with an input from the bus and an output to the bus, the interface comprising a plurality of latches for testing if there is data, and

~~if~~in response to there ~~is~~being data from at least one of the master agents then testing if the data from the bus is a token;

~~if~~in response to the data from the bus is a token, then moving the data from the master to the bus and discarding the token; and

~~if~~in response to the data is not a token from the bus, then moving the data from the input of the bus to the output of the bus;

~~wherein if~~in response to the data is not from the at least one of the master agents and the data is from the bus, then moving the data from the input of the bus to the output of the bus.

10. (Currently Amended) The data communications network according to claim 9 further comprising:

an interface on each slave agent with an input to the bus and an output to the bus, the interface comprising a plurality of latches for testing if there is data from the bus or from the slave agent and if there is data from the bus but not from the slave then moving the data from the bus to the output and if there is data from the slave but not from the bus then moving the data from the slave to the output;

wherein the plurality of latches tests if there is data both from the bus and data from the slave and ~~if~~in response to there is data from both the bus and from the slave then testing if the bus has priority and:

~~wherein if~~in response to the bus ~~has~~having priority then moving the data from the bus to the output and setting the priority to the slave; and

~~wherein if~~in response to the bus does not ~~have~~having priority then moving the data from the slave to the output and setting the priority to the bus.

11. (Original) The data communications network, according to claim 10, wherein the data further includes control, data and parity data.

12. (Original) The data communications network, according to claim 10, wherein at least one of the communication agents is coupled to a first brand of computer and at least one of the communications agents is coupled to a second brand of computer so as to form a heterogeneous environment.

13. (Original) The data communications network, according to claim 10, wherein the bus is selected from a group of buses consisting of wire, wireless and infrared.

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14. (Currently Amended)   The data communications network, according to claim 9, wherein the slave agent includes:

an interface with an input from the bus and an output to the bus, the interface comprising a plurality of latches for testing if the data is for the slave agent and ifin response to the data isbeing for the slave agent then transferring the data to the slave.

15. (Currently Amended) The data communications network, according to claim 9, wherein the interface to each of the master agent agents further comprises a plurality of latches for testing if the data is for the at least one of the master agent agents and if the data is for the at least one of the master agent agents, then passing the data to the at least one of the master agents.

16. (Currently Amended) A computer readable medium containing programming instructions for simultaneous communication over a bus coupling at least one master agent with at least one slave agent, the method on a master agent having an input and an output to the bus, the programming instructions comprising:

coupling at least one slave agent with at least two master agents including a first master agent and a second master agent on a bus:

receiving a reset command;

determining after being reset if at least one of the master agent agents is coupled to an access macro and ifin response to the at least one of the master agent agents is coupled to the access macro then placing n-1 tokens on the bus, where n is the total number of master agents and slave agents communicating on the bus.

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17. (Currently Amended) A computer readable medium containing programming instructions for simultaneous communication over a bus ~~coupling at least one master agent with at least one slave agent~~, the method on a master agent having an input and an output to the bus, the programming instructions comprising:

<u>coupling at least one slave agent with at least two master agents including a first master agent and a second master agent on a bus;</u>

determining if there is data from <u>at least one of</u> the master <u>agents</u>, and if there is data from <u>the at least one of</u> the master <u>agents</u> then performing:

testing if the data from the bus is a token;

<u>in response to</u> the data from the bus <u>being</u> a token, then moving the data from the <u>at least one of the</u> master <u>agents</u> to the bus and discarding the token from the bus; and

<u>in response to</u> the data ~~is~~ not <u>being</u> a token from the bus, then moving the data from the input of the bus to the output of the bus;

wherein <u>in response to</u> the data ~~is~~ not <u>being</u> from the <u>at least one of the</u> master <u>agents</u> and the data is from the bus, then moving the data from the input of the bus to the output of the bus.

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